



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

#1

Access DB# 181907

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 3-9-2006
Art Unit: 1752 Phone Number 301-2-1333 Serial Number: 101812125
Mail Box and Bldg/Room Location: 9D60 Results Format Preferred: (circle) PAPER DISK E-MAIL
(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Ctr.

Title of Invention: Plz. see Bib.

MAR 10 REC'D

Inventors (please provide full names): _____

Pat. & T.M. Office

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Plz. search for
a metal salt of
crystalline, ~~homopolymers~~ polyacetylene
in which the crystalline polyacetylene
has the structure shown in cl. # 8.

| STAFF USE ONLY | | |
|------------------------------------|-----------------------|-----------------------------------|
| | Type of Search | Vendors and cost where applicable |
| Searcher: _____ | NA Sequence (#) _____ | STN _____ |
| Searcher Phone #: _____ | AA Sequence (#) _____ | Dialog _____ |
| Searcher Location: _____ | Structure (#) _____ | Questel/Orbit _____ |
| Date Searcher Picked Up: _____ | Bibliographic _____ | Dr.Link _____ |
| Date Completed: _____ | Litigation _____ | Lexis/Nexis _____ |
| Searcher Prep & Review Time: _____ | Fulltext _____ | Sequence Systems _____ |
| Clerical Prep Time: _____ | Patent Family _____ | WWW/Internet _____ |
| Online Time: _____ | Other _____ | Other (specify) _____ |

=> d his full

FILE 'LREGISTRY' ENTERED AT 09:26:33 ON 13 MAR 2006

L11 STRUCTURE
L27 50 SEA SSS SAM L11
L28 16978 SEA SSS FUL L11
SAV L28 LEE125/A
L29 2217 SEA ABB=ON PLU=ON L28 AND M/ELS

FILE 'HCAPLUS' ENTERED AT 13:19:57 ON 13 MAR 2006

L30 885 SEA ABB=ON PLU=ON L29
L31 439812 SEA ABB=ON PLU=ON IMAG?
L32 256630 SEA ABB=ON PLU=ON MAP?
L33 381181 SEA ABB=ON PLU=ON LITHIUM OR LI
L34 87820 SEA ABB=ON PLU=ON METAL (2A) SALT#
L35 5 SEA ABB=ON PLU=ON L30 (L) L31
L36 1 SEA ABB=ON PLU=ON L30 (L) L32
L37 14 SEA ABB=ON PLU=ON L30 (L) L33
L38 1 SEA ABB=ON PLU=ON L30 (L) L34
L39 26 SEA ABB=ON PLU=ON L30 AND IMAG?
L40 4 SEA ABB=ON PLU=ON L30 AND IMAG? AND (LITHIUM OR LI OR
(METAL (2A) SALT#))
L41 2 SEA ABB=ON PLU=ON L30 AND MAP? AND (LITHIUM OR LI OR
(METAL (2A) SALT#))
L42 45 SEA ABB=ON PLU=ON L30 AND PHOTO?/SC,SX
L43 6 SEA ABB=ON PLU=ON L30 AND IMAG? AND PHOTO?/SC,SX
L44 2020018 SEA ABB=ON PLU=ON CRYSTAL?
L45 153 SEA ABB=ON PLU=ON L30 (L) L44
L46 2 SEA ABB=ON PLU=ON L30 (L) L44 AND PHOTO?/SC,SX
L47 4 SEA ABB=ON PLU=ON L30 AND L44 AND PHOTO?/SC,SX
L48 24 SEA ABB=ON PLU=ON L35 OR L36 OR L37 OR L38 OR L40 OR
L41 OR L43 OR L46 OR L47

=> file reg

FILE 'REGISTRY' ENTERED AT 14:11:46 ON 13 MAR 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

=> d l48 que stat

L11 STR

17 18 19
O O O Ak @24 Cb @25 G4 26
||| ||| |||
C---O C---N Ak~O~C---N
@8 9 @10 11 @13 14 15 16

C≡C~C≡C
22 7 6 20

VAR G4=8/10/13/24/25

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 13

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY UNS AT 25

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1-X4 C AT 13

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

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L29 2217 SEA FILE=REGISTRY ABB=ON PLU=ON L28 AND M/ELS
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L37 14 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (L) L33
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(LITHIUM OR LI OR (METAL (2A) SALT#))
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(LITHIUM OR LI OR (METAL (2A) SALT#))
L43 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND IMAG? AND
PHOTO?/SC,SX
L44 2020018 SEA FILE=HCAPLUS ABB=ON PLU=ON CRYSTAL?
L46 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (L) L44 AND
PHOTO?/SC,SX
L47 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND L44 AND
PHOTO?/SC,SX
L48 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 OR L36 OR L37 OR
L38 OR L40 OR L41 OR L43 OR L46 OR L47

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 14:12:06 ON 13 MAR 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d 148 1-24 ibib abs hitstr hitind

L48 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:583280 HCAPLUS
DOCUMENT NUMBER: 143:262751
TITLE: Gadolinium-Rhodamine Nanoparticles for Cell
Labeling and Tracking via Magnetic Resonance and
Optical Imaging
AUTHOR(S): Vuu, Kien; Xie, Jianwu; McDonald, Michael A.;
Bernardo, Marcelino; Hunter, Finie; Zhang,
Yantian; Li, King; Bednarski, Mark; Guccione,
Samira
CORPORATE SOURCE: National Institutes of Health Research Scholars
Program, Howard Hughes Medical Institute, Chevy
Chase, MD, 20815-6789, USA
SOURCE: Bioconjugate Chemistry (2005), 16(4), 995-999
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel dual-labeled nanoparticle for use in labeling and tracking
cells in vivo is described. The authors report the construction and

characterization of these gadolinium-rhodamine nanoparticles. These particles are constructed from lipid monomers with diacetylene bonds that are sonicated and photolyzed to form polymd. nanoparticles. Cells are efficiently labeled with these nanoparticles. The authors have inoculated labeled tumor cells s.c. into the flanks of C3H mice and have been able to image these labeled tumor cells via MRI and optical imaging. Furthermore, the labeled tumor cells can be visualized via fluorescent microscopy after tissue biopsy. The authors' results suggest that these nanoparticles could be used to track cells in vivo. This basic platform can be modified with different fluorophores and targeting agents for studying metastatic cell, stem cell, and immune cell trafficking among other applications.

IT 302544-03-2

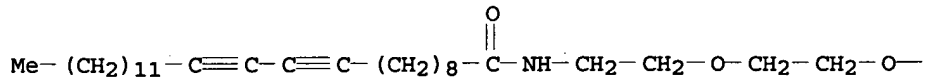
RL: RCT (Reactant); RACT (Reactant or reagent)

(copolymn.; gadolinium-rhodamine polymeric nanoparticles for cell labeling and tracking via magnetic resonance and optical imaging)

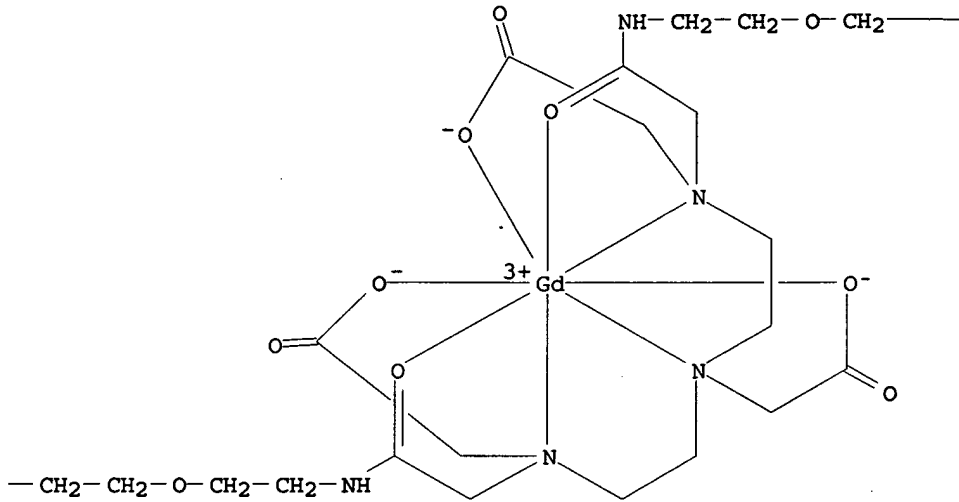
RN 302544-03-2 HCAPLUS

CN Gadolinium, [6,9-bis[(carboxy-κO)methyl]-11-(oxo-κO)-25-oxo-3-[2-(oxo-κO)-16-oxo-6,9,12-trioxa-3,15-diazatetraconta-25,27-diyn-1-yl]-15,18,21-trioxa-3,6,9,12,24-pentaazanonatetraconta-34,36-diynoato(3-)-κN3,κN6,κN9,κO1]- (9CI)
(CA INDEX NAME)

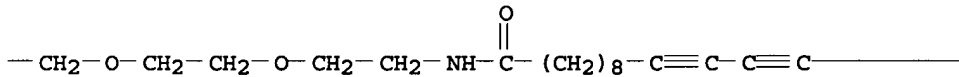
PAGE 1-A



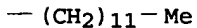
PAGE 1-B



PAGE 1-C



PAGE 1-D



IT 863608-07-5

RL: BUU (Biological use, unclassified); DEV (Device component use);
 BIOL (Biological study); USES (Uses)
 (nanoparticles; gadolinium-rhodamine polymeric nanoparticles for
 cell labeling and tracking via magnetic resonance and optical
 imaging)

RN 863608-07-5 HCAPLUS

CN Gadolinium, [6,9-bis(carboxymethyl)-3-(2,16-dioxo-6,9,12-trioxa-3,15-
 diazatetraconta-25,27-diyn-1-yl)-11,25-dioxo-15,18,21-trioxa-
 3,6,9,12,24-pentaazanonatetraconta-33,35-diynoato(3-)-
 N3,N6,N9,O1,O6,O9]-, polymer with 3,6-bis(diethylamino)-9-[4-
 [[[7R,18Z)-4-hydroxy-4-oxido-10-oxo-7-[[[(9Z)-1-oxo-9-
 octadecenyl]oxy]-3,5,9-trioxa-4-phosphaheptacos-18-en-1-
 yl]amino]sulfonyl]-2-sulfophenyl]xanthylum inner salt, monoammonium
 salt, (7R)-4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[[(1-
 oxohexadecyl)oxy]methyl]-3,5,8-trioxa-4-phosphahentriaconta-18,20-
 diyn-1-aminium inner salt, 4-oxide and N,N,N-trimethyl-2,3-bis[[[(9Z)-
 1-oxo-9-octadecenyl]oxy]-1-propanaminium chloride (9CI) (CA INDEX

NAME)

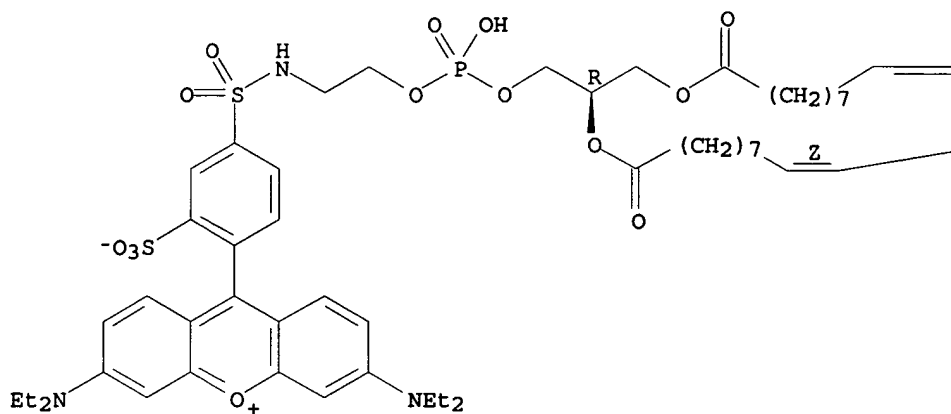
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CRN 384833-00-5

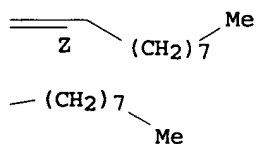
CMF C68 H106 N3 O14 P S2 . H3 N

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

● NH₃

PAGE 1-B



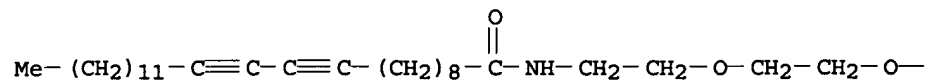
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CRN 164919-50-0

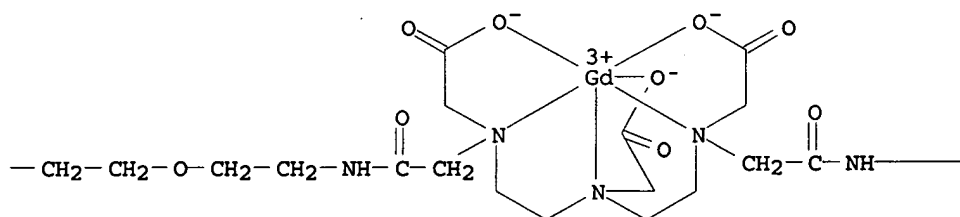
CMF C80 H136 Gd N7 O16

CCI CCS

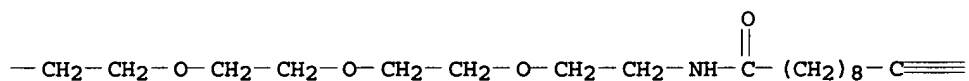
PAGE 1-A



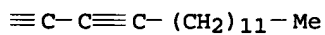
PAGE 1-B



PAGE 1-C



PAGE 1-D



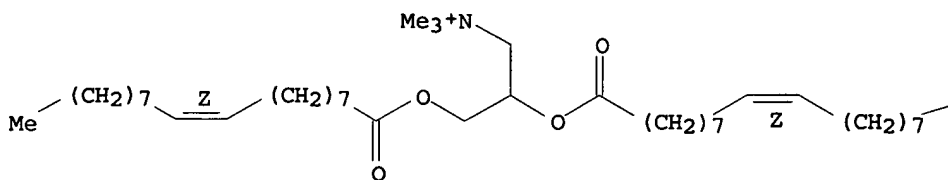
CM 3

CRN 132172-61-3

CMF C42 H80 N O4 . Cl

Double bond geometry as shown.

PAGE 1-A

● Cl⁻

PAGE 1-B

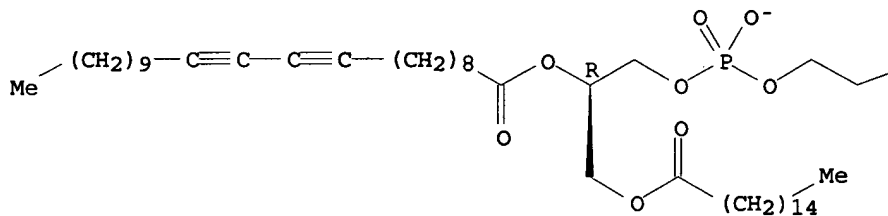
—Me

CM 4

CRN 84271-00-1
CMF C47 H86 N O8 P

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—N+Me₃

CC 9-4 (Biochemical Methods)
Section cross-reference(s): 8
IT 84271-00-1 132172-61-3, DOTAP 302544-03-2 384833-00-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(copolymn.; gadolinium-rhodamine polymeric nanoparticles for cell
labeling and tracking via magnetic resonance and optical
imaging)
IT 863608-07-5
RL: BUU (Biological use, unclassified); DEV (Device component use);

BIOL (Biological study); USES (Uses)
(nanoparticles; gadolinium-rhodamine polymeric nanoparticles for
cell labeling and tracking via magnetic resonance and optical
imaging)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L48 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:824992 HCAPLUS

DOCUMENT NUMBER: 141:339093

TITLE: Lithium salt of polyacetylene as
radiation sensitive filaments and preparation
and use thereof

INVENTOR(S): Anyumba, Janette; Lewis, David F.; Shih,
Hsiao-Yi; Yu, Xiang

PATENT ASSIGNEE(S): Isp Investments Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of
U.S. Provisional Ser. No. 459,559.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| US 2004197700 | A1 | 20041007 | US 2004-789007 | 20040227 |
| CA 2520790 | AA | 20041104 | CA 2004-2520790 | 20040310 |
| WO 2004095065 | A2 | 20041104 | WO 2004-US7273 | 20040310 |
| WO 2004095065 | A3 | 20050728 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| EP 1614002 | A2 | 20060111 | EP 2004-719225 | 20040310 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK | | | |
| WO 2004094967 | A2 | 20041104 | WO 2004-US8895 | 20040324 |
| WO 2004094967 | A3 | 20050602 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, | | | |

Same Invention
Entry

P. P. 7

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,
 KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
 MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,
 SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
 VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,
 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
 ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2003-459559P

P

200304
01

US 2004-789007

A

200402
27

WO 2004-US7273

W

200403
10

AB This invention relates to photochromic filaments composed of the Li salt of a conjugated, polymerizable polyacetylene having a carboxylic acid or carboxylate terminal group wherein the length to width ratio of the filaments is between .apprx.5000:1 and .apprx.5:1 and the av. length of the filament is up to .apprx.5 cm. The invention also pertains to the use of the salts in maximized radiation sensitivity for **imaging**, radiation dose measurement or **mapping** and detection of radiation fields.

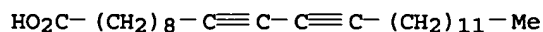
IT 66990-36-1P, Pentacosadiynoic acid, lithium salt

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(lithium salt of polyacetylene as radiation sensitive filaments and prepn. and use thereof)

RN 66990-36-1 HCAPLUS

CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

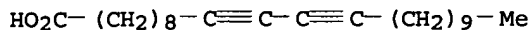
IT 67360-63-8, Tricosadiynoic acid, lithium salt 200412-03-9, Eicosa-5,7-diynoic acid, lithium salt 769952-16-1

RL: TEM (Technical or engineered material use); USES (Uses)

(lithium salt of polyacetylene as radiation sensitive filaments and prepn. and use thereof)

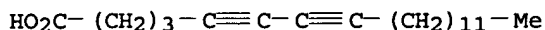
RN 67360-63-8 HCAPLUS

CN 10,12-Tricosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



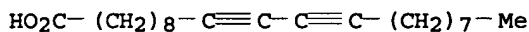
● Li

RN 200412-03-9 HCAPLUS
CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 769952-16-1 HCAPLUS
CN 10,12-Heneicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

IC ICM G03C001-76
INCL 430270100
CC 71-7 (Nuclear Technology)
Section cross-reference(s): 74
ST **lithium** salt polyacetylene photochromic filament
radiochromic dosimeter
IT Radiography
(emulsions; **lithium** salt of polyacetylene as radiation
sensitive filaments and prepn. and use thereof)
IT Filaments
Photochromism
(**lithium** salt of polyacetylene as radiation sensitive
filaments and prepn. and use thereof)
IT Gelatins, uses
RL: NUU (Other use, unclassified); USES (Uses)
(**lithium** salt of polyacetylene as radiation sensitive
filaments and prepn. and use thereof)
IT Radiation detectors
(radiochromic filaments; **lithium** salt of polyacetylene
as radiation sensitive filaments and prepn. and use thereof)
IT Dosimeters
(radiochromic; **lithium** salt of polyacetylene as
radiation sensitive filaments and prepn. and use thereof)
IT Photographic emulsions
(radiog.; **lithium** salt of polyacetylene as radiation
sensitive filaments and prepn. and use thereof)
IT 554-13-2, **Lithium** carbonate 7447-41-8, **Lithium**
chloride, uses 7787-69-1, Cesium bromide 7790-69-4,
Lithium nitrate 10377-48-7, **Lithium** sulfate
106716-27-2, Amphosol CA
RL: MOA (Modifier or additive use); USES (Uses)
(**lithium** salt of polyacetylene as radiation sensitive

filaments and prepn. and use thereof)

IT 9002-18-0, Agar agar 11138-66-2, Xanthan gum
 RL: NUU (Other use, unclassified); USES (Uses)
 (lithium salt of polyacetylene as radiation sensitive
 filaments and prepn. and use thereof)

IT 769952-15-0P
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP
 (Preparation); RACT (Reactant or reagent)
 (lithium salt of polyacetylene as radiation sensitive
 filaments and prepn. and use thereof)

IT 66990-36-1P, Pentacosa-10,12-diynoic acid, lithium
 salt
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (lithium salt of polyacetylene as radiation sensitive
 filaments and prepn. and use thereof)

IT 77-98-5, Tetraethyl ammonium hydroxide 546-89-4, Lithium
 acetate 66990-32-7, Pentacosa-10,12-diynoic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (lithium salt of polyacetylene as radiation sensitive
 filaments and prepn. and use thereof)

IT 67360-63-8, Tricosa-10,12-diynoic acid, lithium
 salt 200412-03-9, Eicosa-5,7-diynoic acid, lithium
 salt 769952-16-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (lithium salt of polyacetylene as radiation sensitive
 filaments and prepn. and use thereof)

L48 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:824983 HCAPLUS
 DOCUMENT NUMBER: 141:340546
 TITLE: Composition and method for 3-dimensional
 mapping or radiation dose
 INVENTOR(S): Anyumba, Janette; Lewis, David F.; Shih,
 Hsiao-yi; Yu, Xiang
 PATENT ASSIGNEE(S): Isp Investments Inc., USA
 SOURCE: U.S. Pat. Appl. Publ., 6 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| US 2004197684 | A1 | 20041007 | US 2004-812125 | 200403 29 |
| WO 2004094967 | A2 | 20041104 | WO 2004-US8895 | 200403 24 |
| WO 2004094967 | A3 | 20050602 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, | | | | |

DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
 ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2003-459559P

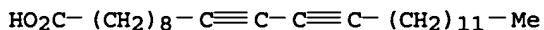
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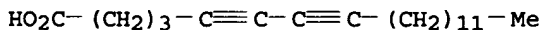
AB In accordance with this invention, there is provided a method of **imaging**, measuring and displaying a 3-dimensional dose distribution of an energy field in a translucent 3-dimensional object. The method comprises steps of: applying an energy field to the object such that the optical properties are changed upon receipt of the energy; optically scanning the object at various positions and angles to provide a series of 2-dimensional representations of the object; detecting the measuring light projection data indicative of optical changes in the object; calibrating the optical change in the object to the dose of the energy corresponding to each position scan; **mapping** the dose of the energy in the object and visually recording the summation of said 2-dimensional representations on an **image** display receiver. The method uses radiation activated **metal salt** of a **cryst.**, thermochromic polyacetylene having a conjugated structure uniformly distributed in a rigid or high d. semi-solid matrix by a color alteration due to polymn. of the activated polyacetylene to provide a permanent, 3-dimensional **image** of the object in high spatial resoln. The invention further provides **image** display receivers and radiation sensitive materials.

IT 66990-36-1P, Lithium pentacosanoate
 200412-03-9P, Lithium eicosanoate
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (compn. and method for 3-dimensional **mapping** or radiation dose)
 RN 66990-36-1 HCAPLUS
 CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 200412-03-9 HCAPLUS
 CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

IC ICM G03C001-73
 ICS G03C005-00
 INCL 430030000; 430270100
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 ST **mapping** 3D radiation dose compn method **image**

display
 IT Optical imaging devices
 Radiation detectors
 (compn. and method for 3-dimensional mapping or
 radiation dose)
 IT Gelatins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (crosslinked; compn. and method for 3-dimensional mapping
 or radiation dose)
 IT 66990-36-1P, Lithium pentacos-10,12-diynoate
 200412-03-9P, Lithium eicosa-5,7-diynoate
 769952-15-0P 769953-02-8P
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (compn. and method for 3-dimensional mapping or
 radiation dose)
 IT 66990-32-7, Pentacos-10,12-diynoic acid 69288-29-5,
 Eicosa-5,7-diynoic acid
 RL: TEM (Technical or engineered material use); USES (Uses)
 (compn. and method for 3-dimensional mapping or
 radiation dose)

L48 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:532140 HCAPLUS

DOCUMENT NUMBER: 139:106450

TITLE: Targeted multivalent macromolecules

INVENTOR(S): Wartchow, Charles Aaron; Dechene, Neal Edward;
 Pease, John S.; Shen, Zhimin; Trulson, Julie;
 Bednarski, Mark David; Danthi, S. Narasimhan;
 Zhang, Michael; Choi, Hoyul Steven

PATENT ASSIGNEE(S): Targesome, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 71 pp., Cont.-in-part of
 U.S. Ser. No. 976,254.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------------|
| ----- | --- | ----- | ----- | |
| US 2003129223 | A1 | 20030710 | US 2002-158777 | 200205 30 |
| US 2002071843 | A1 | 20020613 | US 2001-976254 | 200110 11 |
| ZA 2003009924 | A | 20050622 | ZA 2003-9924 | 200312 22 |
| PRIORITY APPLN. INFO.: | | | US 2000-239684P | P 200010 11 |
| | | | US 2001-294309P | P 200105 30 |
| | | | US 2001-309104P | P 200107 31 |

US 2001-312435P P
200108
15

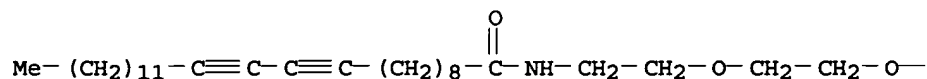
US 2001-976254 A2
200110
11

AB Targeted therapeutic agents, comprising a linking carrier, a therapeutic entity assocd. with the linking carrier, and at least one targeting entity are provided, as well as methods for their prepn. and use. A targeted therapeutic agent is selected from matrix metalloprotease inhibitors, analgesics, aggrecanase inhibitors, alkylating agents, topoisomerase inhibitors, estrogens, androgens, interferons, intercalating agents, kinase modulators, etc. The linking carrier comprises a phosphatidylcholine and is selected from liposomes and a polymd. vesicle. A targeting entity targets a lipid construct to a target selected from a cell surface target, an intracellular target, and an extracellular matrix component. The targeting entity has, e.g., a vascular or tumor cell target selected from chemokine receptors, matrix metalloproteases, integrins, or prostate-specific membrane antigens. For example, integrin-targeted 90Y-labeled peptidomimetic vesicle complexes (IA-NP-Y90) at 5 μ Ci/g reduced tumor growth in a melanoma mouse model with av. normalized tumor vol. less than half the vol. in the buffer-treated animals. In addn., the av. tumor vol. quadrupling time (TVQT) for tumor treated with IA-NP-Y90 was 15.0 days compared to 6.4 days for tumors treated with buffer.

IT 477274-38-7DP, polymer contg.
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(paramagnetic nanoparticles contg.; prepn. of targeted multivalent macromols. for therapy, **imaging** and diagnosis of cancer)

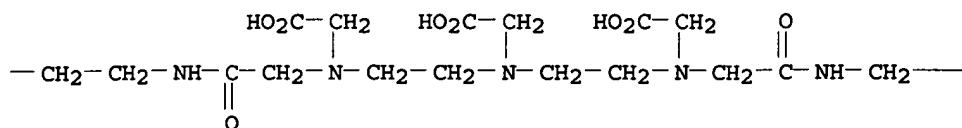
RN 477274-38-7 HCAPLUS
CN 15,18-Dioxa-3,6,9,12,21-pentaazahexatetraconta-31,33-diyneic acid, 6,9-bis(carboxymethyl)-3-(2,13-dioxo-6,9-dioxa-3,12-diazaheptatriaconta-22,24-diyn-1-yl)-11,22-dioxo-, trisodium salt (9CI) (CA INDEX NAME)

PAGE 1-A

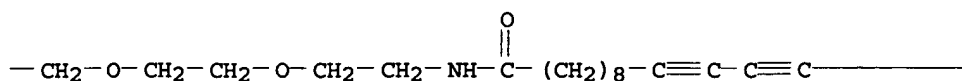


●3 Na

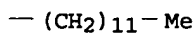
PAGE 1-B



PAGE 1-C



PAGE 1-D



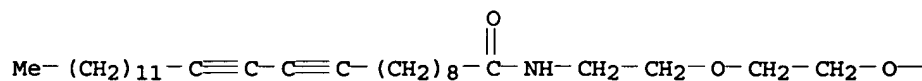
IT 477274-38-7

RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of targeted multivalent macromols. for therapy,
 imaging and diagnosis of cancer)

RN 477274-38-7 HCAPLUS

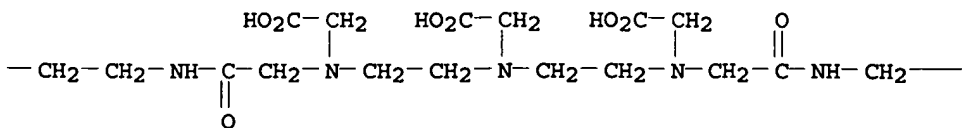
CN 15,18-Dioxa-3,6,9,12,21-pentaazahexatetraconta-31,33-diynoic acid,
 6,9-bis(carboxymethyl)-3-(2,13-dioxo-6,9-dioxa-3,12-
 diazaheptatriaconta-22,24-diyn-1-yl)-11,22-dioxo-, trisodium salt
 (9CI) (CA INDEX NAME)

PAGE 1-A

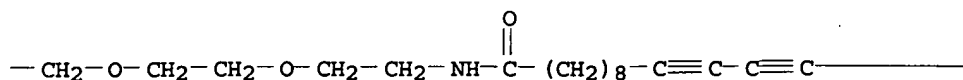


●3 Na

PAGE 1-B



PAGE 1-C



PAGE 1-D

--- (CH₂)₁₁---Me

IC ICM A61K039-395
ICS A61K009-127
INCL 424450000; 424146100; 424178100
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 8, 15
IT 75898-25-8DP, polymer contg. 477274-37-6DP, polymer contg.
477274-38-7DP, polymer contg. 477274-39-8DP, polymer
contg.
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
(Biological study); PREP (Preparation); USES (Uses)
(paramagnetic nanoparticles contg.; prepn. of targeted
multivalent macromols. for therapy, **imaging** and
diagnosis of cancer)
IT 107-35-7, Taurine 108-30-5, Succinic anhydride, reactions
929-59-9, 1,8-Diamino-3,6-dioxaoctane 6066-82-6,
N-Hydroxysuccinimide 25322-68-3, Polyethylene glycol 66990-30-5,
10,12-Tricosadiynoic acid 66990-32-7, 10,12-Pentacosadiynoic acid
77087-60-6 164919-52-2 174665-28-2 **477274-38-7**
477274-39-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of targeted multivalent macromols. for therapy,
imaging and diagnosis of cancer)

L48 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:496035 HCAPLUS

DOCUMENT NUMBER: 137:311010

TITLE: Synthesis and characterization of
trans-phenylethynylalkynyl adducts on a
tetraanilinopyridinato-diruthenium(III) core

AUTHOR(S): Xu, Guolin; Ren, Tong

CORPORATE SOURCE: Department of Chemistry and Center for
Supramolecular Science, University of Miami,
Coral Gables, FL, 249118 33124-0431, USA

SOURCE: Journal of Organometallic Chemistry (2002),
655(1-2), 239-243

CODEN: JORCAI; ISSN: 0022-328X

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:311010

AB Treating Ru₂(ap)₄Cl (ap = anilinopyridinato) with large excess of
LiC₂Ph gave previously unidentified trans-Ru₂(ap)₄(C₂Ph)₂ (2a) where
ap is 2-anilinopyridinate. Reactions between Ru₂(ap)₄(C₂X) and
LiC₂Ph in excess yielded similar bis-alkynyl compds.

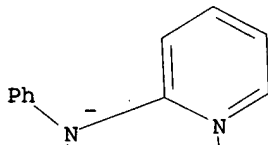
trans-(PhC₂)[Ru₂(ap)₄](C₂X) (X = SiMe₃, 2b, C₂SiMe₃, 2c). Also reported are electrochem. and spectroscopic characterizations of compds. 2a-c and x-ray structural anal. of compds. 2a and 2b.

IT 347841-72-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with lithium phenylacetylide)

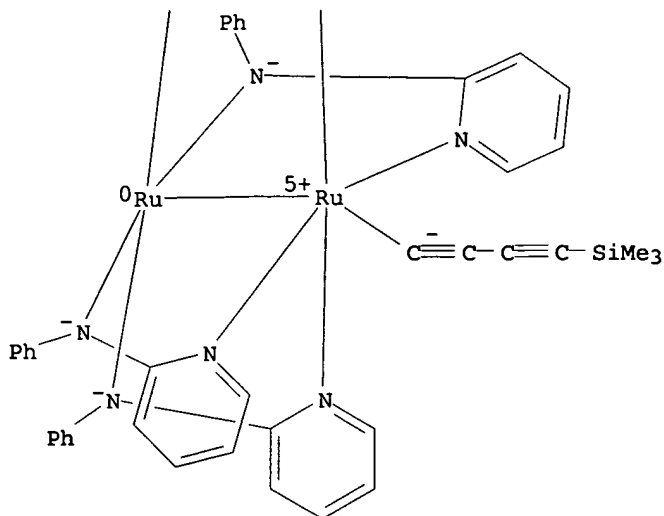
RN 347841-72-9 HCAPLUS

CN Ruthenium, tetrakis[μ-(N-phenyl-2-pyridinaminato-κN1:κN2)][4-(trimethylsilyl)-1,3-butadiynyl]di-, (Ru-Ru)
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



CC 29-13 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 72, 75

IT 94089-99-3 265317-41-7 347841-72-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with lithium phenylacetylide)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L48 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:106553 HCAPLUS

DOCUMENT NUMBER: 136:325675

TITLE: Thermal and Photochemical Silicon-Carbon Bond
Activation in Donor-Stabilized
Platinum(0)-Alkyne Complexes

AUTHOR(S): Mueller, Christian; Lachicotte, Rene J.; Jones,
William D.

CORPORATE SOURCE: Department of Chemistry, University of
Rochester, Rochester, NY, 14627, USA

SOURCE: Organometallics (2002), 21(6), 1190-1196
CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:325675

AB Reaction of Pt(COD)₂ with Me₃SiC.tplbond.CPh and a bidentate chelating ligand leads to the formation of the corresponding donor-stabilized Pt-η²-alkyne complexes (PN)Pt(η²-Me₃SiC.tplbond.CPh) (1) and (dcpe)Pt(η²-Me₃SiC.tplbond.CPh) (3) (PN = (diisopropylphosphinodimethylamino)ethane; dcpe = bis(dicyclohexylphosphino)ethane). The nitrogen donor ligand in 1 facilitates the cleavage of the Si-C(sp) bond, and the Pt(II) complex (PN)Pt(SiMe₃)(C.tplbond.CPh) (2) is formed at room temp. In contrast, the bisphosphino-substituted compd. 3 was isolated as a thermally robust Pt(0) complex. However, the silicon-carbon bond in the latter compd. can be photochem. activated, and the oxidative addn. product (dcpe)Pt(SiMe₃)(C.tplbond.CPh) (4) is generated. Both Si-C(sp) bonds in Me₃Si-C.tplbond.C-C.tplbond.C-SiMe₃ were thermally

activated by a (PN)Pt fragment to afford the dinuclear Pt(II) species (PN)Pt(SiMe₃)-C.tplbond.C-C.tplbond.C-Pt(SiMe₃)(PN) (6).

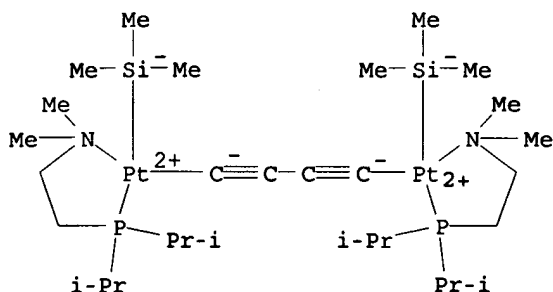
IT 412347-26-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and **crystal** structure)

RN 412347-26-3 HCAPLUS

CN Platinum, bis[2-[bis(1-methylethyl)phosphino-κP]-N,N-dimethylethanamine-κN]-μ-1,3-butadiyne-1,4-diylbis(trimethylsilyl)di-, stereoisomer (9CI) (CA INDEX NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 74, 75

ST silicon carbon bond activation thermal platinum alkyne complex; **crystal** mol structure platinum isopropylphosphinodimethylaminoethane silylalkyne complex prepn; platinum cyclohexylphosphinoethane silylalkyne complex prepn **crystal** mol structure; carbon silicon bond activation photochem platinum alkyne complex

IT **Crystal** structure

Molecular structure

(of platinum alkyne complexes)

IT 412347-22-9P 412347-24-1P 412347-26-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and **crystal** structure)

IT 412347-27-4P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn., **crystal** structure, and substitution reaction with phenyltrimethylsilylacetylene)

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:23034 HCAPLUS

DOCUMENT NUMBER: 136:263663

TITLE: Surface molecular structure determination of lithium salt of 10,12-nonacosadiynoic acid monomer and polymer Langmuir-Blodgett films by scanning force microscopy compared to electron diffraction results

AUTHOR(S): Tseng, Scott C.; Lando, Jerome B.; Mann, J. Adin, Jr.

CORPORATE SOURCE: Polymer Microdevice Laboratory, Department of Chemical Engineering and Macromolecular Science, Case Western Reserve University, Cleveland, OH,

44106, USA
 SOURCE: Journal of Macromolecular Science, Pure and Applied Chemistry (2001), A38(12), 1393-1404
 CODEN: JSPCE6; ISSN: 1060-1325
 PUBLISHER: Marcel Dekker, Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

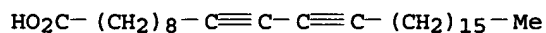
AB Langmuir-Blodgett films of lithium salts of 10,12-nonacosadiynoic acid monomer (Li/16-8 DA) and polymer (Li/16-8 PDA) were characterized by scanning force microscopy (SFM or AFM) to study their surface mol. structure. Based on anal. of these images, a two-dimensional oblique unit mesh is assigned for Li/16-8 DA monomer LB film with unit mesh parameter $c=0.549\pm0.040$ nm and $b=0.541\pm0.060$ nm with an angle of 113° . A hexagonal unit mesh is assigned for Li/16-8 PDA with unit mesh parameter $c=0.497\pm0.052$ nm and $b=0.497\pm0.060$ nm. We then report the comparison of two-dimensional, fast Fourier transform (FFT) of SFM images to the electron diffraction images. From the viewpoint of a three-dimensional structure projected onto a plane, centered rectangular nets can be assigned for both Li/16-8 DA and Li/16-8 PDA. The monomer unit cell parameters are $c=0.460\pm0.040$ nm and $b=1.020\pm0.060$ nm. The polymer cell parameters are $c=0.485\pm0.080$ nm and $b=0.820\pm0.010$ nm. The correlation between the two different methods of surface structure detn. is excellent. However, care must be taken in assigning the unit net (two-dimensional representation) and the projected unit cell (three-dimensional) vectors.

IT 75862-63-4, 10,12-Nonacosadiynoic acid, lithium salt, homopolymer
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (surface mol. structure detn. of 10,12-nonacosadiynoic acid lithium salt LB films by scanning force microscopy)

RN 75862-63-4 HCAPLUS
 CN 10,12-Nonacosadiynoic acid, lithium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 70393-92-9
 CMF C29 H50 O2 . Li



● Li

CC 36-2 (Physical Properties of Synthetic High Polymers)
 ST nonacosadiynoic acid lithium salt LB film surface structure detn; scanning force microscopy LB film surface structure detn
 IT Atomic force microscopes
 (for surface mol. structure detn. of 10,12-nonacosadiynoic acid lithium salt LB films)
 IT Surface roughness
 Surface structure
 (of 10,12-nonacosadiynoic acid lithium salt LB films)
 IT Creep

Langmuir-Blodgett films
 Surface pressure-area isotherms
 (surface mol. structure detn. of 10,12-nonacosadiynoic acid
 lithium salt LB films by scanning force microscopy)
 IT 75862-63-4, 10,12-Nonacosadiynoic acid, lithium
 salt, homopolymer
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PRP (Properties); PROC (Process)
 (surface mol. structure detn. of 10,12-nonacosadiynoic acid
 lithium salt LB films by scanning force microscopy)
 REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L48 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:352341 HCAPLUS

DOCUMENT NUMBER: 133:120379

TITLE: Exploratory Studies on the Synthesis of
 Unsymmetrically Substituted Diacetylenes Bearing
 Trialkoxysilyl Groups and Development of a
 Method for the Preparation of
 1-Lithio-4-(2,8,9-trioxa-5-aza-1-
 silabicyclo[3.3.3]undecanyl)-1,3-butadiyne:
 Synthetic and Mechanistic Aspects

AUTHOR(S): Brunel, Luc; Chaplais, Gerald; Dutremez, Sylvain
 G.; Guerin, Christian; Henner, Bernard J. L.;
 Tomberli, Veronique

CORPORATE SOURCE: Laboratoire Chimie Moleculaire et Organisation
 du Solide, Universite Montpellier II,
 Montpellier, 34095, Fr.

SOURCE: Organometallics (2000), 19(13), 2516-2525
 CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 133:120379

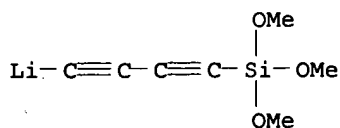
AB (Z)-CH₃OCH:CHC.tplbond.CSi(OCH₃)₃ (2), ((Z)-
 CH₃OCH:CHC.tplbond.C)2Si(OCH₃)₂ (5), and (Z)-
 CH₃OCH:CHC.tplbond.CSi(OCHMe₂)₃ (16) were synthesized from
 (Z)-CH₃OCH:CHC.tplbond.CH (1). Enynes 2 and 16 were subjected to a
 deprotonation-elimination-deprotonation sequence with 2 equiv of Li
 diisopropylamide (LDA) in THF and the expected intermediates
 (RO)3SiC.tplbond.CC.tplbond.CLi (R = CH₃, CHMe₂) allowed to react
 with R'3SiCl (R' = CH₃, C₆H₅) to produce the unsym. butadiynes
 (RO)3SiC.tplbond.CC.tplbond.CSiR'3. Sym. butadiynes
 R'3SiC.tplbond.CC.tplbond.CSiR'3 were obtained instead of the
 expected unsym. ones due to cleavage of the Csp-Si(OR)₃ bond by
 CH₃OLi formed in situ. Cleavage of the latter bond can be avoided
 by using a silatrane moiety in place of the trialkoxysilyl group.
 Thus, Me3SiC.tplbond.CC.tplbond.CSi(OCH₂CH₂)₃N (26a) and
 Ph3SiC.tplbond.CC.tplbond.CSi(OCH₂CH₂)₃N (26b) were obtained in 61%
 and 45% yield, resp., upon subjecting (Z)-
 CH₃OCH:CHC.tplbond.CSi(OCH₂CH₂)₃N (20) to a deprotonation-
 elimination-metalation sequence with 2 equiv of LDA followed by
 quenching of the intermediate Li compd.
 LiC.tplbond.CC.tplbond.CSi(OCH₂CH₂)₃N (25) with Me3SiCl and Ph3SiCl.
 The deprotonation-elimination-metalation sequence applied to 20 is
 best carried out in pyridine, and the role of pyridine in this
 reaction is discussed.

IT 284019-61-0, (4-(Trimethoxysilyl)-1,3-butadiynyl)
 lithium

RL: RCT (Reactant); RACT (Reactant or reagent)

(attack of lithium methoxide on)

RN 284019-61-0 HCAPLUS
 CN Lithium, [4-(trimethoxysilyl)-1,3-butadiynyl]- (9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 284019-61-0, (4-(Trimethoxysilyl)-1,3-butadiynyl)

lithium

RL: RCT (Reactant); RACT (Reactant or reagent)

(attack of lithium methoxide on)

REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L48 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:639833 HCAPLUS

DOCUMENT NUMBER: 131:356493

TITLE: STM images of individual porphyrin molecules on Cu(100) and Cu(111) surfaces

AUTHOR(S): Bampos, Nick; Woodburn, Charles N.; Welland, Mark E.; Sanders, Jeremy K. M.

CORPORATE SOURCE: Cambridge Centre for Molecular Recognition, University Chemical Laboratory, Cambridge, CB21EW, UK

SOURCE: Angewandte Chemie, International Edition (1999), 38(18), 2780-2783

CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB STM images of a meta-substituted zinc porphyrin deriv. mol. as well as of its linear dimer, cyclic dimer, and cyclic trimer on Cu(111) and Cu(100) substrates were obtained. The mols. were vapor deposited in vacuum. The mechanism behind image contrast is discussed.

IT 169967-48-0

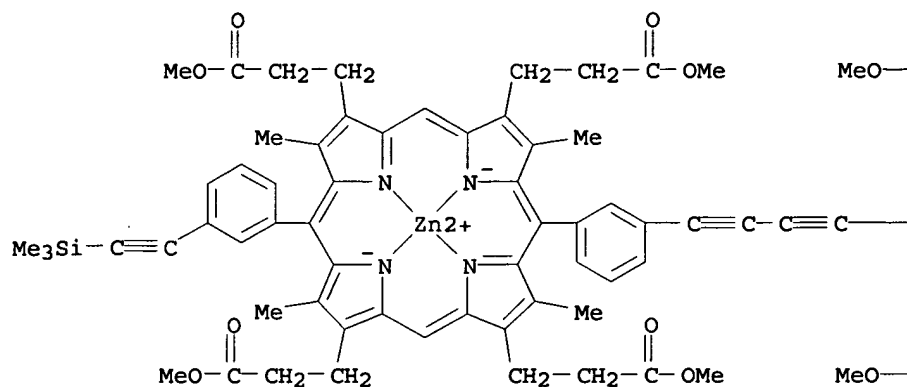
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(STM images of individual porphyrin mols. on Cu(100) and Cu(111) surfaces)

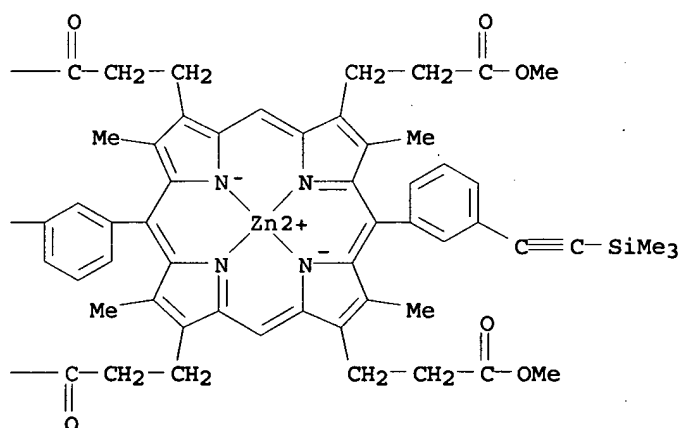
RN 169967-48-0 HCAPLUS

CN Zinc, [μ -[octamethyl 5,5'-(1,3-butadiyne-1,4-diyl)-3,1-phenylene]bis[3,7,13,17-tetramethyl-15-{3-[(trimethylsilyl)ethynyl]phenyl}-21H,23H-porphine-2,8,12,18-tetrapropionate- κ N21, κ N22, κ N23, κ N24}]](4-)]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 66-3 (Surface Chemistry and Colloids)
 IT 130829-46-8 130829-47-9 160895-41-0 169967-48-0
 RL: PEP (Physical, engineering or chemical process); PRP
 (Properties); PROC (Process)
 (STM images of individual porphyrin mols. on Cu(100)
 and Cu(111) surfaces)

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L48 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:559020 HCAPLUS

DOCUMENT NUMBER: 132:166877

TITLE: Surface molecular structure of
 poly(10,12-nonacosadiynoic acid)
 Langmuir-Blodgett films

AUTHOR(S): Tseng, Scott C. J.; Mann, Jay A.; Bai, Zongwu;
 Tan, Seng C.; Lando, Jerome B.

CORPORATE SOURCE: Wright Materials Research Co., Dayton, OH, USA

SOURCE: Polymer Preprints (American Chemical Society,

Division of Polymer Chemistry) (1999), 40(2),
703-704
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer
Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Langmuir-Blodgett films of lithium salts of 10,12-nonacosadiynoic
acid monomer and poly(10,12-nonacosadiynoic acid) were characterized
by at. force microscopy to study their surface mol. structure.
Based on direct observations, an oblique unit mesh is assigned for
the monomer film. A hexagonal unit mesh is assigned for the polymer
film.
IT 70393-92-9, 10,12-Nonacosadiynoic acid, lithium
salt
RL: PRP (Properties)
(surface mol. structure of Langmuir-Blodgett films)
RN 70393-92-9 HCAPLUS
CN 10,12-Nonacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)

$\text{HO}_2\text{C}-(\text{CH}_2)_8-\text{C}\equiv\text{C}-\text{C}\equiv\text{C}-(\text{CH}_2)_{15}-\text{Me}$

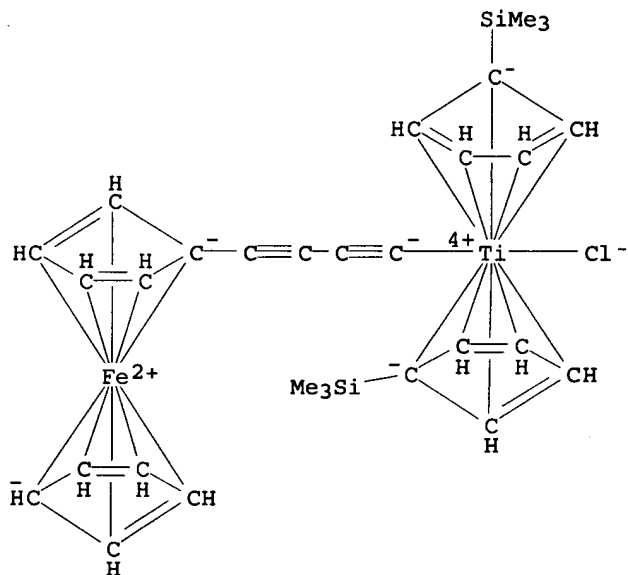
● Li

CC 36-5 (Physical Properties of Synthetic High Polymers)
IT 70393-92-9, 10,12-Nonacosadiynoic acid, lithium
salt 86168-68-5
RL: PRP (Properties)
(surface mol. structure of Langmuir-Blodgett films)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L48 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:379765 HCAPLUS
DOCUMENT NUMBER: 131:130108
TITLE: A synthetic approach to all-carbon molecular
rods with organometallic terminals
AUTHOR(S): Hayashi, Yukiko; Osawa, Masahisa; Wakatsuki,
Yasuo
CORPORATE SOURCE: The Institute of Physical and Chemical Research
(RIKEN), Wako, 351-0198, Japan
SOURCE: Hyper-Structured Molecules I: Chemistry, Physics
and Applications, [International Forum on
Hyper-Structured Molecules], 1st, Kusatsu,
Japan, Nov. 4-6, 1996 (1999), Meeting Date 1996,
35-42. Editor(s): Sasabe, Hiroyuki. Gordon &
Breach: Amsterdam, Neth.
CODEN: 67TFAV
DOCUMENT TYPE: Conference
LANGUAGE: English
OTHER SOURCE(S): CASREACT 131:130108
AB The authors present the synthesis of various bis(monoyne)-,
(monoyne)(diyne)-, and bis(diyne)-titanocenes with ferrocenyl and
ruthenocenyl terminal groups and also the coupling reaction of the
two alkynyl moieties induced by electrochem. or chem. oxidn. This
reaction array is a convenient route to C4, C6, and C8-atoms
rigid-rod mol. wire capped at both terminals with ferrocenyl or

ruthenocenyl groups, e.g. $\text{Fc}(\text{C.tplbond.C})_3\text{Fc}$ (obtained in 95% yield from $(\text{TMSC5H}_4)_2\text{Ti}((\text{C.tplbond.C})_2\text{Fc})(\text{C.tplbond.CFc})$ using 2 equiv AgPF_6). Selected mol. structural parameters of $(\text{TMSC5H}_4)_2\text{Ti}((\text{C.tplbond.C})_2\text{Fc})_2$, detd. by x-ray crystallog., are given.

IT 196926-07-5P, Chloro(4-ferrocenyl-1,3-butadiynyl)bis(η^5 -(trimethylsilyl)cyclopentadienyl)titanium
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and metatheses with ferrocenylethynyl-,
 ruthenocenylethynyl-, and ruthenocenylbutadiynyl-lithium
 compds.)
 RN 196926-07-5 HCAPLUS
 CN Titanium, chloro(4-ferrocenyl-1,3-butadiynyl)bis[(1,2,3,4,5- η)-1-(trimethylsilyl)-2,4-cyclopentadien-1-yl]- (9CI) (CA INDEX NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT 196926-07-5P, Chloro(4-ferrocenyl-1,3-butadiynyl)bis(η^5 -(trimethylsilyl)cyclopentadienyl)titanium
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and metatheses with ferrocenylethynyl-,
 ruthenocenylethynyl-, and ruthenocenylbutadiynyl-lithium
 compds.)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L48 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:783815 HCAPLUS

DOCUMENT NUMBER: 128:68556

TITLE: Processless diacetylenic salt films capable of
 developing a black image

INVENTOR(S): Lewis, David F.; Varma, Sangya S.

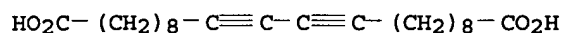
PATENT ASSIGNEE(S): ISP Investments Inc., USA

SOURCE: PCT Int. Appl., 74 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 9744708 | A1 | 19971127 | WO 1997-US4688 | 19970307 |
| W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 5731112 | A | 19980324 | US 1996-652144 | 19960523 |
| AU 9725415 | A1 | 19971209 | AU 1997-25415 | 19970307 |
| EP 900409 | A1 | 19990310 | EP 1997-916931 | 19970307 |
| EP 900409 | B1 | 20040811 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2000512627 | T2 | 20000926 | JP 1997-542334 | 19970307 |
| AT 273530 | E | 20040815 | AT 1997-916931 | 19970307 |
| US 6177578 | B1 | 20010123 | US 1998-35607 | 19980305 |
| PRIORITY APPLN. INFO.: | | | US 1996-652144 | A 19960523 |
| | | | WO 1997-US4688 | W 19970307 |

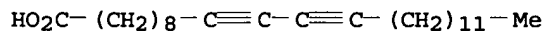
AB This invention relates to a mixt. of **imageable** polyacetylenic compds. which have similar photosensitivities and which are visually **imageable** in complementary colors combinable to provide a black **image**, which mixt. contains at least one polyacetylenic **metal salt** which produces a color, preferably a **metal salt** of a diacetylene C6 to C48 mono- or dicarboxylic acid, which is complementary to a color produced by another polyacetylenic **metal salt** or non-metallic polyacetylenic compd. contained in the mixt. or in an another integral color forming layer. The invention also pertains to the use of said mixt. and the manner of its prepn.

IT 52892-21-4P 66990-36-1P, Lithium
 pentacos-10,12-diynoate 200412-00-6P, Zinc
 bis(Pentacos-10,12-diynoate) 200412-01-7P
 200412-02-8P, Zinc bis(eicosa-5,7-diynoate)
 200412-03-9P, Lithium eicosa-5,7-diynoate
 200412-04-0P, Zinc bis(octadeca-5,7-diynoate)
 200412-05-1P
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (processless diacetylenic salt films capable of developing black
 image)
 RN 52892-21-4 HCAPLUS
 CN 10,12-Docosadiynedioic acid, barium salt (1:1) (9CI) (CA INDEX
 NAME)



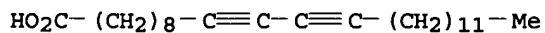
● Ba

RN 66990-36-1 HCAPLUS
 CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



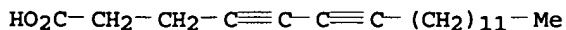
● Li

RN 200412-00-6 HCAPLUS
 CN 10,12-Pentacosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



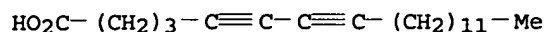
● 1/2 Zn

RN 200412-01-7 HCAPLUS
 CN 4,6-Nonadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



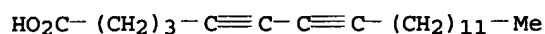
● 1/2 Zn

RN 200412-02-8 HCAPLUS
 CN 5,7-Eicosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



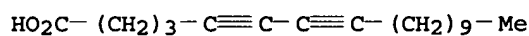
● 1/2 Zn

RN 200412-03-9 HCAPLUS
CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



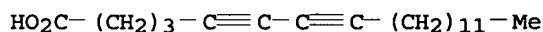
● Li

RN 200412-04-0 HCAPLUS
CN 5,7-Octadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

RN 200412-05-1 HCAPLUS
CN 5,7-Eicosadiynoic acid, barium salt (9CI) (CA INDEX NAME)



● 1/2 Ba

IC ICM G03C001-735
ICS G03C005-56; C07C057-18; C07C057-24
CC 74-9 (Radiation Chemistry, **Photochemistry**, and
Photographic and Other Reprographic Processes)
ST diacetylenic salt film black **image**; thermochromism
diacetylenic salt film
IT Thermochromic materials
Thermochromism
(processless diacetylenic salt films capable of developing black
image)
IT 127-09-3, Sodium acetate 137-40-6, Sodium propionate 156-54-7,
Sodium butyrate 557-28-8, Zinc propionate 557-34-6, Zinc acetate
1984-06-1, Sodium octanoate 7446-81-3, Sodium acrylate
7447-40-7, Potassium chloride, uses 7647-14-5, Sodium chloride,
uses 10043-52-4, Calcium chloride, uses 10051-44-2, Sodium
hexanoate 10099-58-8, Lanthanum chloride 14644-61-2, Zirconium
sulfate
RL: MOA (Modifier or additive use); USES (Uses)
(processless diacetylenic salt films capable of developing black
image)
IT 5970-45-6P, Zinc acetate dihydrate 10196-18-6P, Zinc nitrate

hexahydrate

RL: PNU (Preparation, unclassified); PREP (Preparation)
(processless diacetylenic salt films capable of developing black image)

IT 28393-02-4P, Docosa-10,12-diynoic acid 52892-21-4P

66990-36-1P, Lithium pentacosa-10,12-diynoate
200412-00-6P, Zinc bis(Pentacosa-10,12-diynoate)

200412-01-7P 200412-02-8P, Zinc
bis(eicosa-5,7-diynoate) 200412-03-9P, Lithium
eicosa-5,7-diynoate 200412-04-0P, Zinc
bis(octadeca-5,7-diynoate) 200412-05-1P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(processless diacetylenic salt films capable of developing black image)

IT 66990-32-7, Pentacosa-10,12-diynoic acid 69288-29-5,

Eicosa-5,7-diynoic acid 115748-07-7, Nonadeca-4,6-diynoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)
(processless diacetylenic salt films capable of developing black image)

L48 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:625697 HCAPLUS

DOCUMENT NUMBER: 127:293343

TITLE: Reductive coupling reaction induced by
remote-site oxidation in titanocene
bis(metallocenylacetylide), where metallocenyl =
ferrocenyl or ruthenocenyl: a novel route to Cn
(n = 4, 6, and 8) wire with the metallocenyl
groups at both terminals

AUTHOR(S): Hayashi, Yukiko; Osawa, Masahisa; Wakatsuki,
Yasuo

CORPORATE SOURCE: The Institute of Physical and Chemical Research
(RIKEN), Wako-shi, Saitama, Japan

SOURCE: Journal of Organometallic Chemistry (1997),
542(2), 241-246
CODEN: JORCAI; ISSN: 0022-328X

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:293343

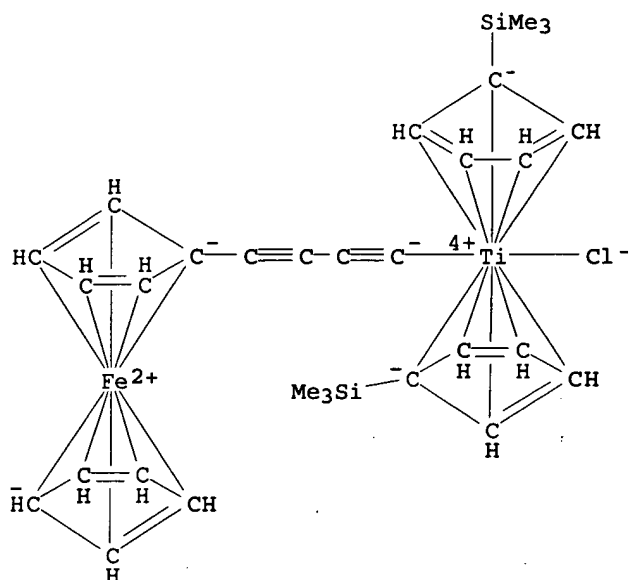
AB The titanocene bis(acetylide) complexes (η^5 -
C₅H₄R)2Ti[(C.tplbond.C)m-Mc] [(C.tplbond.C)n-Mc'] (R = H, SiMe₃; m, n
= 1 or 2; Mc, Mc' = ferrocenyl or ruthenocenyl) were prep'd. and are
easily oxidized with 2 equiv amt. of AgPF₆ liberating a neutral
product, Mc-(C.tplbond.C)m(C.tplbond.C)n-Mc'. Electrochem. studies
indicate that the reaction is induced by initial oxidn. of Mc and
Mc' followed by unprecedented reductive coupling of the two alkynyl
carbons bound to titanocene.

IT 196926-07-5P, Chloro(4-ferrocenyl-1,3-butadiynyl)bis(η^5 -
(trimethylsilyl)cyclopentadienyl)titanium

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. and reactions with lithium
metallocenylacetylides)

RN 196926-07-5 HCAPLUS

CN Titanium, chloro(4-ferrocenyl-1,3-butadiynyl)bis[(1,2,3,4,5- η)-1-
(trimethylsilyl)-2,4-cyclopentadien-1-yl]- (9CI) (CA INDEX NAME)



CC 29-10 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 72

IT 196926-07-5P, Chloro(4-ferrocenyl-1,3-butadiynyl)bis(η5-(trimethylsilyl)cyclopentadienyl)titanium

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(prepn. and reactions with lithium metallocenylacetylides)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:212411 HCAPLUS

DOCUMENT NUMBER: 124:290398

TITLE: Solid-State Polymerization Behaviors of Crystalline Diacetylene Monolayers on Hydrophilic Surfaces

AUTHOR(S): Kuriyama, Keisuke; Kikuchi, Hirotsugu; Kajiyama, Tisato

CORPORATE SOURCE: Faculty of Engineering, Kyushu University, Fukuoka, 812, Japan

SOURCE: Langmuir (1996), 12(9), 2283-8

CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

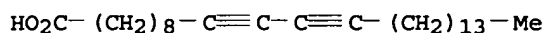
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Solid-state polymn. behaviors of cryst. Li 10,12-heptacosadiynoate monolayers on the hydrophilic SiO substrate and on the water surface were investigated on the basis of the UV light irradiation time dependence of the UV-visible absorption spectrum. In the case of the cryst. monolayer on the SiO substrate, the polydiacetylene (PDA) monolayer in a blue form was formed upon UV photoirradiation. For the cryst. monolayer on a water surface, the PDA monolayer in a red form was formed by the polymn. reaction. The PDA blue and red forms exhibit absorption peaks at 640 and 540 nm, resp. The 2-dimensional

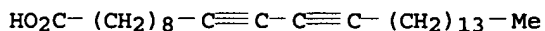
(2D) mol. packings of the PDA monolayers in both forms were clarified by electron diffraction anal. for the first time. Each form had distinct 2D mol. packing relating to its electronic structure. The difference in the solid-state polymn. behaviors for the cryst. Li 10,12-heptacosadiynoate monolayers on different substrate surfaces was discussed in terms of the thermal mobility of mols. in the monolayer.

IT 76564-85-7, Lithium 10,12-heptacosadiynoate
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant);
 PROC (Process); RACT (Reactant or reagent)
 (solid-state polymn. of cryst. diacetylene monolayers on
 hydrophilic surfaces)
 RN 76564-85-7 HCAPLUS
 CN 10,12-Heptacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

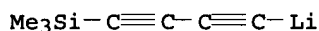
IT 76564-86-8P, Lithium 10,12-heptacosadiynoate
 homopolymer
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (solid-state polymn. of cryst. diacetylene monolayers on
 hydrophilic surfaces)
 RN 76564-86-8 HCAPLUS
 CN 10,12-Heptacosadiynoic acid, lithium salt, homopolymer (9CI) (CA
 INDEX NAME)
 CM 1
 CRN 76564-85-7
 CMF C27 H46 O2 . Li



● Li

CC 35-4 (Chemistry of Synthetic High Polymers)
 IT 76564-85-7, Lithium 10,12-heptacosadiynoate
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant);
 PROC (Process); RACT (Reactant or reagent)
 (solid-state polymn. of cryst. diacetylene monolayers on
 hydrophilic surfaces)
 IT 76564-86-8P, Lithium 10,12-heptacosadiynoate
 homopolymer
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (solid-state polymn. of cryst. diacetylene monolayers on
 hydrophilic surfaces)
 L48 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1996:58855 HCAPLUS
 DOCUMENT NUMBER: 124:232665
 TITLE: A titanium(III) tweezer complex with an embedded
 alkali metal ion between diynyl ligands:

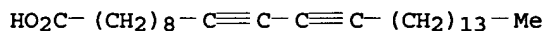
AUTHOR(S): [(C5HMe4)2Ti(η 1-C.tplbond.CC.tplbond.CSiMe3)2]-[Li(THF)2]+
 Varga, Vojtech; Mach, Karel; Hiller, Joerg;
 Thewalt, Ulf
 CORPORATE SOURCE: J. Heyrovsky Institute of Physical Chemistry,
 Academy of Sciences of the Czech Republic,
 Dolejskova 3, Prague, 182 23/8, Czech.
 SOURCE: Journal of Organometallic Chemistry (1996),
 506(1-2), 109-12
 CODEN: JORCAI; ISSN: 0022-328X
 PUBLISHER: Elsevier
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB [Li(THF)2]+[(η 5-C5HMe4)2Ti(η 1-C.tplbond.CC.tplbond.CSiMe3)2]-
 (1) was obtained by the reaction of (C5HMe4)2TiCl with 2 equiv of
 LiC.tplbond.CC.tplbond.CSiMe3 in THF. X-ray crystal structure detn.
 of 1 revealed that the Li ion is embedded between the inner triple
 bonds of the 4-trimethylsilyl-1,3-butadiyn-1-yl tweezer arms. The
 EPR spectrum of 1 shows a single line, $\Delta H = 2.5$ G at $g =$
 1.9940 (± 0.0003), and coupling to ^{49}Ti and ^{47}Ti isotopes a (Ti) =
 7.5 G.
 IT 73084-25-0, ((Trimethylsilyl)butadiynyl)lithium
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with titanium chloro cyclopentadienyl complex)
 RN 73084-25-0 HCAPLUS
 CN Lithium, [4-(trimethylsilyl)-1,3-butadiynyl]- (9CI) (CA INDEX NAME)



CC 29-10 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 75
 IT 73084-25-0, ((Trimethylsilyl)butadiynyl)lithium
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with titanium chloro cyclopentadienyl complex)
 L48 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1995:845315 HCAPLUS
 DOCUMENT NUMBER: 123:229046
 TITLE: Molecular aggregation state-photopolymerization
 behavior relationship of lithium
 10,12-heptacosadiynoate monolayer
 AUTHOR(S): Kuriyama, Keisuke; Kikuchi, Hirotsugu; Oishi,
 Yushi; Kajiyama, Tisato
 CORPORATE SOURCE: Fac. Eng., Kyushu Univ., Fukuoka, 812, Japan
 SOURCE: Langmuir (1995), 11(9), 3536-41
 CODEN: LANGD5; ISSN: 0743-7463
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The temp. effect on the polymn. of lithium 10,12-heptacosadiynoate
 monolayer with relation to its aggregation structure was studied. A
 mol. aggregation state of the monolayer on the water surface was
 investigated on the basis of the subphase temp. (Tsp) dependences of
 the elastic modulus and the electron diffraction pattern of the
 monolayer. The monolayer on the water surface was classified into a
 molten monolayer, a cryst. one and a glassy one, depending on Tsp in
 comparison with the melting temp. of the monolayer on the water
 surface. The photopolymn. behaviors of the monolayers in various
 aggregation states were also investigated by the UV light irradsn.
 time dependences of UV-visible absorption spectrum. The

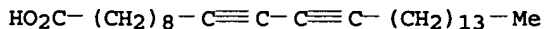
photopolymn. was less reactive in the case of the monolayer in a molten state. On the other hand, the poly(diacetylene) (PDA) blue form monolayer, which had an absorption peak at 640 nm, was formed upon photoirradn. to the cryst. monolayer. Moreover, in the case of the glassy monolayer, PDA red form monolayer, which had an absorption peak at 540 nm, was found to be formed by UV light irradsn. The delocalization length of a π -electron in the PDA red form would be shorter than that in the PDA blue form, as suggested by the wavelength of the main absorption peak corresponding to π - π^* transition. The difference in the delocalization length of the π -electron between the PDA blue form and the PDA red form could be explained by the lattice strain on conjugated PDA main chains caused during the polymn. reaction.

IT 76564-86-8P, 10,12-Heptacosadiynoic acid, lithium salt, homopolymer
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (mol. aggregation state-photopolymn. behavior relationship of lithium 10,12-heptacosadiynoate monolayer)
 RN 76564-86-8 HCAPLUS
 CN 10,12-Heptacosadiynoic acid, lithium salt, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 76564-85-7
 CMF C27 H46 O2 . Li



● Li

IT 76564-85-7, 10,12-Heptacosadiynoic acid, lithium salt
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant);
 PROC (Process); RACT (Reactant or reagent)
 (monolayer; mol. aggregation state-photopolymn. behavior relationship of lithium 10,12-heptacosadiynoate monolayer)
 RN 76564-85-7 HCAPLUS
 CN 10,12-Heptacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

CC 35-3 (Chemistry of Synthetic High Polymers)
 IT 76564-86-8P, 10,12-Heptacosadiynoic acid, lithium salt, homopolymer
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (mol. aggregation state-photopolymn. behavior relationship of lithium 10,12-heptacosadiynoate monolayer)
 IT 76564-85-7, 10,12-Heptacosadiynoic acid, lithium salt
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant);

PROC (Process); RACT (Reactant or reagent)
 (monolayer; mol. aggregation state-photopolymn. behavior
 relationship of lithium 10,12-heptacosadiynoate
 monolayer)

L48 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:684260 HCAPLUS

DOCUMENT NUMBER: 123:286893

TITLE: Structural analyses of lithium heptacosadiynoate
 monolayer on the water surface and its
 importance for photopolymerization behaviors of
 monolayer

AUTHOR(S): Kuriyama, K.; Kajiyama, T.

CORPORATE SOURCE: Faculty Engineering, Kyushu University, Higashi,
 812, Japan

SOURCE: Transactions of the Materials Research Society
 of Japan (1994), 15A(Biomaterials, Organic and
 Intelligent Materials), 571-4
 CODEN: TMRJE3; ISSN: 1382-3469

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The melting temp., T_m of lithium heptacosadiynoate monolayer on the
 water surface was evaluated to be 300 K from the subphase temp., T_{sp}
 dependences of both the modulus and electron diffraction, ED pattern
 of the monolayer. The aggregation structure of the monolayer during
 a compressing process at T_{sp} below and above T_m was investigated by
 the bright field electron micrograph and the ED pattern. The
 monolayer on the water surface was classified into a cryst.
 monolayer and an amorphous one depending on the T_{sp} s below and above
 T_m of the monolayer, resp. Photopolymn. behaviors of the monolayers
 at T_{sp} below and above T_m were investigated on the basis of the UV
 irradian. time dependence of UV-visible absorption spectrum.
 Polydiacetylene(PDA) monolayer with remarkable cryst. quality was
 obtained only by the photopolymn. of the cryst. monolayer.

IT 76564-86-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)

(monolayer; structure of lithium heptacosadiynoate
 monolayer on the water surface in relation to photopolymn.
 behaviors of the monolayer)

RN 76564-86-8 HCAPLUS

CN 10,12-Heptacosadiynoic acid, lithium salt, homopolymer (9CI) (CA
 INDEX NAME)

CM 1

CRN 76564-85-7

CMF C27 H46 O2 . Li

$\text{HO}_2\text{C}-(\text{CH}_2)_8-\text{C}\equiv\text{C}-\text{C}\equiv\text{C}-(\text{CH}_2)_{13}-\text{Me}$

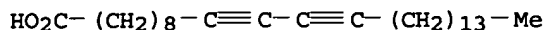
● Li

IT 76564-85-7

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)

(structure of lithium heptacosadiynoate monolayer on
 the water surface in relation to photopolymn. behaviors of the

monolayer)
 RN 76564-85-7 HCAPLUS
 CN 10,12-Heptacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

CC 35-4 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 66
 IT 76564-86-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (monolayer; structure of lithium heptacosadiynoate
 monolayer on the water surface in relation to photopolymn.
 behaviors of the monolayer)
 IT 76564-85-7
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
 (structure of lithium heptacosadiynoate monolayer on
 the water surface in relation to photopolymn. behaviors of the
 monolayer)

L48 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

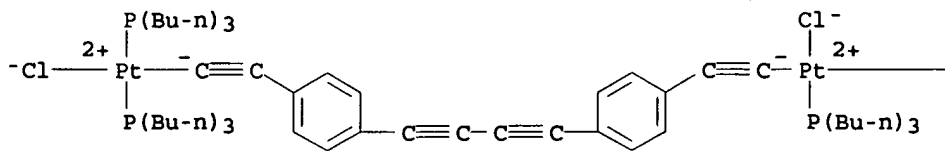
ACCESSION NUMBER: 1994:410668 HCAPLUS
 DOCUMENT NUMBER: 121:10668
 TITLE: Nonlinear optical thin films of platinum
 polyynes
 AUTHOR(S): Porter, Pamela; Guha, Shekhar; Kang, Keith;
 Frazier, Claude C.
 CORPORATE SOURCE: Marin Marietta Lab., Baltimore, MD, 21227, USA
 SOURCE: Contemporary Topics in Polymer Science (1992),
 7(Advances in New Materials), 293-8
 CODEN: CTPSDH; ISSN: 0160-6727
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The imaginary part of the third-order hyperpolarizability was
 measured for a series of platinum polyynes (polydiacetylene) in both
 soln. and thin-film form, and for a group of related platinum-org.
 species.

IT 73575-25-4 119989-43-4 123849-66-1
 155761-81-2 155761-83-4
 RL: PRP (Properties)
 (third-order hyperpolarizability of thin films of,
 imaginary part of)

RN 73575-25-4 HCAPLUS
 CN Platinum, [μ -[1,3-butadiyne-1,4-diylbis(4,1-phenylene-2,1-
 ethynediyl)]]dichlorotetrakis(tributylphosphine)di- (9CI) (CA INDEX
 NAME)

PAGE 1-A



PAGE 1-B

— P(Bu-n)₃

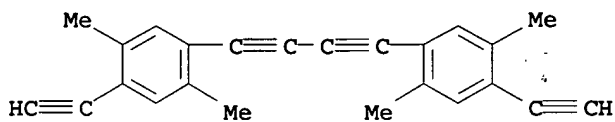
RN 119989-43-4 HCAPLUS

CN Platinum, dichlorobis(tributylphosphine)-, (SP-4-1)-, polymer with
1,1'-(1,3-butadiyne-1,4-diyl)bis[4-ethynyl-2,5-dimethylbenzene]
(9CI) (CA INDEX NAME)

CM 1

CRN 119989-42-3

CMF C24 H18

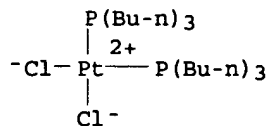


CM 2

CRN 15391-01-2

CMF C24 H54 Cl2 P2 Pt

CCI CCS



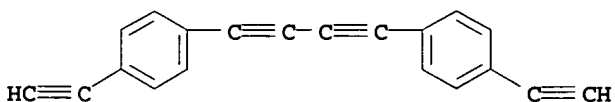
RN 123849-66-1 HCAPLUS

CN Platinum, dichlorobis(tributylphosphine)-, (SP-4-1)-, polymer with
1,1'-(1,3-butadiyne-1,4-diyl)bis[4-ethynylbenzene] (9CI) (CA INDEX
NAME)

CM 1

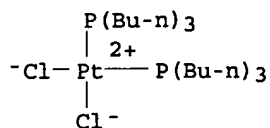
CRN 124417-94-3

CMF C20 H10



CM 2

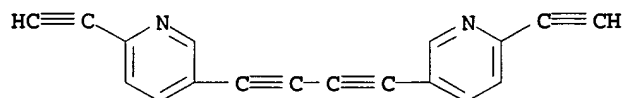
CRN 15391-01-2
 CMF C24 H54 Cl2 P2 Pt
 CCI CCS



RN 155761-81-2 HCAPLUS
 CN Platinum, dichlorobis(tributylphosphine)-, (SP-4-1)-, polymer with
 3,3'-(1,3-butadiyne-1,4-diyl)bis[6-ethynylpyridine] (9CI) (CA INDEX
 NAME)

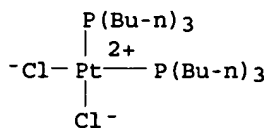
CM 1

CRN 155761-80-1
 CMF C18 H8 N2



CM 2

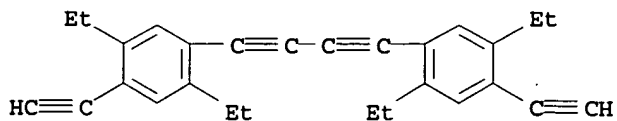
CRN 15391-01-2
 CMF C24 H54 Cl2 P2 Pt
 CCI CCS



RN 155761-83-4 HCAPLUS
 CN Platinum, dichlorobis(tributylphosphine)-, (SP-4-1)-, polymer with
 1,1'-(1,3-butadiyne-1,4-diyl)bis[2,5-diethyl-4-ethynylbenzene] (9CI)
 (CA INDEX NAME)

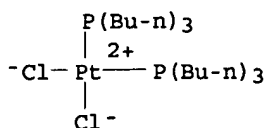
CM 1

CRN 155761-82-3
 CMF C28 H26



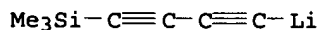
CM 2

CRN 15391-01-2
 CMF C24 H54 Cl2 P2 Pt
 CCI CCS



CC 37-5 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38, 73
 IT 73575-25-4 119989-43-4 123849-66-1
 137000-68-1 137000-86-3 155761-81-2 155761-83-4
 RL: PRP (Properties)
 (third-order hyperpolarizability of thin films of,
 imaginary part of)

L48 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1991:142768 HCAPLUS
 DOCUMENT NUMBER: 114:142768
 TITLE: Diastereoselective heteroconjugate addition
 using phenylthioacetylene
 AUTHOR(S): Herunsalee, Angkana; Isobe, Minoru; Fukuda,
 Yoshio; Goto, Toshio
 CORPORATE SOURCE: Sch. Agric., Nagoya Univ., Nagoya, 464, Japan
 SOURCE: Synlett (1990), (11), 701-3
 CODEN: SYNLES; ISSN: 0936-5214
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 114:142768
 AB Phenylthioacetylene, as its lithium acetylide, was used for the
 opening of epoxides to afford 1-phenylthio-1-alkyn-4-ols.
 Hydrosilylation of the acetylene moiety was followed by oxidn. of
 sulfur to give the corresponding 4-hydroxy-1-silyl-1-alkenyl
 sulfones, which act as the electrophile in heteroconjugate addn.
 Very high stereoselectivity is shown in the addn. The
 stereocontrolled processes are discussed.
 IT 73084-25-0, (4-Trimethylsilyl-1,3-butadiynyl)lithium
 RL: PROC (Process)
 (heteroconjugate addn. of, to (hydroxycyclopentyl)vinyl sulfone
 deriv.)
 RN 73084-25-0 HCAPLUS
 CN Lithium, [4-(trimethylsilyl)-1,3-butadiynyl]- (9CI) (CA INDEX NAME)



CC 25-7 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 Section cross-reference(s): 27
 IT 73084-25-0, (4-Trimethylsilyl-1,3-butadiynyl)lithium
 132556-16-2
 RL: PROC (Process)
 (heteroconjugate addn. of, to (hydroxycyclopentyl)vinyl sulfone
 deriv.)

L48 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1988:177225 HCAPLUS
 DOCUMENT NUMBER: 108:177225
 TITLE: Patterning with built-up monomolecular films
 INVENTOR(S): Tomita, Yoshinori; Sakai, Kunihiro; Matsuda,
 Hiroshi; Kawada, Harunori; Eguchi, Takeshi;
 Kimura, Noriaki
 PATENT ASSIGNEE(S): Canon K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------------|
| JP 62229246 | A2 | 19871008 | JP 1986-73111 | 198603 31 |
| US 4798740 | A | 19890117 | US 1987-30364 | 198703 26 |
| PRIORITY APPLN. INFO.: | | | JP 1986-73111 | A 198603 31 |
| | | | JP 1986-73112 | A 198603 31 |
| | | | JP 1986-77023 | A 198604 03 |

AB Patterning is effected by (1) depositing a polymerizable thin film, consisting of a transition metal and a polymerizable compd. and capable of yielding solvent-sol.- and solvent-insol.-states, and (2) exposing to energy beams (heat, near-UV, far-UV, electron beams, soft x-rays, x-rays) to form solvent-sol. and solvent-insol. regions in the shape of the desired pattern(s). The polymerizable compd. is RC:CC:C(R1)nX (R, R1 = hydrophobic group; X = hydrophilic group; n = 0, 1). Thus, a CHCl3 soln. of Cl2H25C:CC:CC7H14CO2H (I) was spread on an aq. MnCl2 soln. After evapn. of the CHCl3, a n-Si:Sb substrate was dipped in the soln. while controlling the surface tension of the I monomol. film. After depositing 15 layers of the monomol. film, the dried film was patternwise scanned with electron beams of 0.4 and 8 $\mu\text{C}/\text{m}^2$ and developed with EtOH. High contrast images were obtained with a resoln. of 0.2 μ .

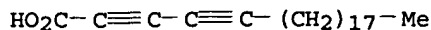
IT 85233-94-9

RL: USES (Uses)

(monomol. films of, resist and coating materials from)

RN 85233-94-9 HCAPLUS

CN 2,4-Tricosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



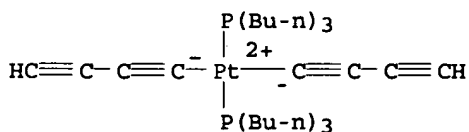
● 1/2 Mn(II)

IC ICM G03C005-08
 ICS G03C001-00; G03C001-68; G03C001-74; G03F007-00; G03F007-16
 CC 74-5 (Radiation Chemistry, **Photochemistry**, and
Photographic and Other Reprographic Processes)
 Section cross-reference(s): 76
 IT 85233-94-9 86936-74-5 113982-41-5
 RL: USES (Uses)
 (monomol. films of, resist and coating materials from)

L48 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1985:446329 HCAPLUS
 DOCUMENT NUMBER: 103:46329
 TITLE: New series of liquid-crystalline
 materials containing metal atoms
 AUTHOR(S): Takahashi, Shigetoshi
 CORPORATE SOURCE: Inst. Sci. Ind. Res., Osaka Univ., Osaka, 567,
 Japan
 SOURCE: Memoirs of the Institute of Scientific and
 Industrial Research, Osaka University (1985),
 42, 1-11
 CODEN: MISIAW; ISSN: 0369-0369
 DOCUMENT TYPE: Journal
 LANGUAGE: English

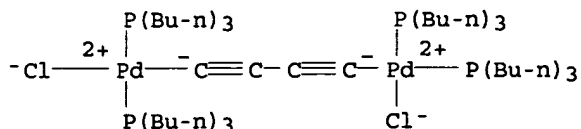
AB Transition metal-poly(yn) polymers were synthesized from
 polycondensation with an appropriate combination of the metal halide
 and acetylenic compd. or acetylide complex. The polymers are the
 first lyotropic liq. **crystal** materials which form nematic
 liq. **crystals** in concd. trichloroethylene solns. In
 addn., a new series of thermotropic liq.-**cryst.** materials
 contg. a B atom in the principal structure, the dioxaborinane
 derivs., was prepd. by a method including a new Pd-catalyzed
 coupling reaction. They form stable mesomorphic phases in a wide
 range of temp.

IT 64396-21-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with dichlorobis(tributylphosphine)palladium, in
 liq. **crystal** phase formation)
 RN 64396-21-0 HCAPLUS
 CN Platinum, di-1,3-butadiynylbis(tributylphosphine)-, (SP-4-1)- (9CI)
 (CA INDEX NAME)



IT 69468-31-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with diethynylbenzene)
 RN 69468-31-1 HCAPLUS
 CN Palladium, μ -1,3-butadiyne-1,4-diyl-dichlorotetrakis(tributylphosp

hine)di-, stereoisomer (9CI) (CA INDEX NAME)



- CC 75-11 (Crystallography and Liquid Crystals)
Section cross-reference(s): 74
- ST transition metal polyyne liq crystal; platinum polyyne liq crystal; palladium polyyne liq crystal; nickel polyyne liq crystal
- IT Liquid crystals
(palladium, platinum and nickel-contg., polyyne, prepn. of)
- IT Liquid crystals
(polyyne series, contg. palladium, platinum and nickel)
- IT 7440-02-0, properties 7440-05-3, properties 7440-06-4, properties
RL: PRP (Properties)
(liq. crystal polyyne phase contg.)
- IT 69476-83-1P 80347-22-4P 81833-14-9P 89636-24-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(liq. crystals, prepn. and phase transition of)
- IT 64396-21-0 75867-45-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dichlorobis(tributylphosphine)palladium, in liq. crystal phase formation)
- IT 69468-31-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with diethynylbenzene)

L48 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:143919 HCAPLUS

DOCUMENT NUMBER: 98:143919

TITLE: Solid state polymerization and optical properties of diacetylene Langmuir-Blodgett multilayers

AUTHOR(S): Kajzar, F.; Messier, J.

CORPORATE SOURCE: Dep. Electron. Instrum. Nucl., Cent. Etud. Nucl. Saclay, Gif-sur-Yvette, 91191, Fr.

SOURCE: Thin Solid Films (1983), 99(1-3), 109-16
CODEN: THSFAP; ISSN: 0040-6090

DOCUMENT TYPE: Journal

LANGUAGE: English

- AB Polymn. of Langmuir-Blodgett multilayers of C18H37C.tplbond.CC.tplbond.CCO2H and its salts with NH4, Ag(I), Na, Cd, Cu, Hg, and Mn is discussed. The acid and monovalent salts (except Na) polymd. in the solid phase, while divalent metal salts polymd. or decarboxylated, except Cu which decarboxylated and polymd. The optical spectra of the polymers depended on the ions present. For(I) and the NH4 salt, blue form of the polymer with an absorption peak at .apprx.6250 Å (shifting to smaller wavelengths with increasing polymer content) was obsd., as in polymers with internal diyne groups. For I Ag+ salt, the absorption peak was shifted to longer wavelengths (.apprx.6700 Å). The extent of polymn. of I and the NH4 and Ag salts was .apprx.50%. For I Cu salt, the absorption peak for the decarboxylated form was .apprx.4350 Å and for the polymer [84975-44-0] was .apprx.7100 Å. The 3rd-order nonlinear

susceptibility of the I.NH₄⁺ polymer [84992-79-0] was close to that detd. for a polymer with an internal diyne group.

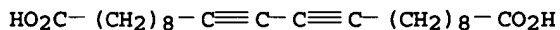
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36

L48 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1974:444150 HCAPLUS
DOCUMENT NUMBER: 81:44150
TITLE: Sensitized compounds and elements
INVENTOR(S): Ehrlich, Sanford H.
PATENT ASSIGNEE(S): Eastman Kodak Co.
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------------|
| US 3811895 | A | 19740521 | US 1972-217979 | 197201 14 |
| PRIORITY APPLN. INFO.: | | | US 1972-217979 | A 197201 14 |

AB The sensitivity of radiation-sensitive polyyne compds. is extended into the x-ray region by the use of organometallic sensitizers, such as triphenylbismuthine (I) and hexaphenyldilead (II). Thus, a compn. contg. the monomethyl ester of 10,12-docosadiynedioic acid 0.3, I 0.6, polystyrene 2.1 g, and PhMe 25 ml was coated on a poly(ethylene terephthalate) support to give a 30-μ thick layer (dry) and exposed to a direct x-ray source (50 kV, 40 mA, at 3-in.). A printout image d. of 0.43 was obtained vs. 0.02 for a I-free control.

IT 52892-21-4
RL: PRP (Properties)
(sensitization of, to x-rays, by hexaphenyldilead)
RN 52892-21-4 HCAPLUS
CN 10,12-Docosadiynedioic acid, barium salt (1:1) (9CI) (CA INDEX NAME)



● Ba

IC G03C
INCL 096088000
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)
IT 52892-21-4
RL: PRP (Properties)
(sensitization of, to x-rays, by hexaphenyldilead)

L48 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1969:426550 HCAPLUS

DOCUMENT NUMBER: 71:26550
 TITLE: Photographic material and a process for the formation of an **image** using that material
 INVENTOR(S): Cremeans, George E.; Foltz, Rodger L.; Trent, Donald E.
 PATENT ASSIGNEE(S): Battelle Development Corp.
 SOURCE: Fr., 26 pp.
 CODEN: FRXXAK
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| FR 1525738 | | 19680517 | FR | |
| DE 1547651 | | | DE | |
| GB 1154191 | | | GB | |
| US 3501297 | | 19700317 | US | 19660606 |
| US 3501302 | | 19700317 | US | 19660606 |
| US 3501303 | | 19700317 | US | 19660606 |
| US 3679738 | | 19720725 | US | 19700316 |
| PRIORITY APPLN. INFO.: | | | US | 19660606 |

AB A photosensitive system for receiving an **image** consists of photosensitive **crystals** of a photosensitive **cryst** . polyacetylene compd. held in a fixed position on a support. Visible **images** are formed directly by exposing the **crystals** to radiant energy so as to obtain a visible change in color in the irradiated portions of the **crystal**. The **cryst.** polyacetylene compd. is a lower alc. ester of a dicarboxylic diacetylene compd. in which the carboxy groups are at each end of the mol. The support bears a layer endowed with a good capability for the transmission of radiant energy which initiates a photosensitive response in the photosensitive **crystals**. The procedure for the direct formation of visible printed **images** consists in exposing the **crystals** to the action of radiant energy depending on the **image** to be formed, so as to obtain the initiation of a visible color change in the irradiated portions of the **crystals**. An **image** is formed at least in part by the portions of the **crystals** having had their color changed. The preferred esters and salts of polyacetylene compds. terminating in dicarboxylic groups have the structural formula; $\text{HO}_2\text{C}(\text{CH}_2)\text{m}_1(\text{C.tplbond.C})\text{n}(\text{CH}_2)\text{m}_2\text{CO}_2\text{H}$, in which n is a whole no. = 2, m1 and m2 are whole nos., preferably 6-9. The preferred compds. include: the dimethyl and diethyl esters of tetracosadiyne-11,13-dioic acid (I); dibenzyl ester of docosadiyne-10,12-dioic acid, dimethyl ester of hexadeca-7,9-dioic acid, etc. Thus, a small amt. of I contg. .apprx.20-30% of the monoethyl ester of I is dissolved in alc. The soln. is poured into

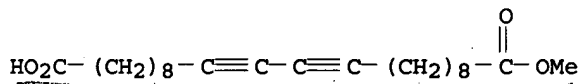
aq. poly(vinyl alc.) with vigorous stirring. A suspension of finely divided **crystals** is obtained in the aq. poly(vinyl alc.). When the suspension is spread onto the surface of a base or substrate, such as a sheet of white paper, and dried by mild heating, so as to evap. the H₂O and alc., a system consisting of a layer on the paper substrate, in which there is a layer of binder contg. colorless **crystals** of the diacid diyne results. When the system is exposed to uv rays of $\lambda = 2537\text{\AA}$. the irradiated diacid diyne takes on a deep blue to purple color, and after a prolonged exposure takes on a bronze color which appears stable in the absence of an addnl. exposure to uv radiation at <50°. If the exposed material is heated above 120°, the blue-bronze product changes to a red color.

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(photosensitive compns. contg.)

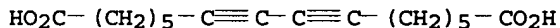
RN 24643-44-5 HCAPLUS

CN 10,12-Docosadiynedioic acid, monomethyl ester, potassium salt (8CI).
(CA INDEX NAME)

● K

RN 24643-45-6 HCAPLUS

CN 7,9-Hexadecadiynedioic acid, dipotassium salt (8CI) (CA INDEX NAME)



●2 K

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CC 74 (Radiation Chemistry, Photochemistry, and
Photographic Processes)

IT 4161-51-7 24567-40-6 24567-41-7 24567-42-8 24574-07-0
 24643-40-1 24643-41-2 24643-44-5 24643-45-6
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